

Title (en)

METHOD AND APPARATUS FOR DERIVING A MENTAL STATE OF A SUBJECT

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ABLEITUNG EINES GEISTESZUSTANDES EINER PERSON

Title (fr)

PROCÉDÉ ET APPAREIL POUR LA DÉRIVATION D'UN ÉTAT MENTAL D'UN SUJET

Publication

**EP 3240481 A1 20171108 (EN)**

Application

**EP 15875799 A 20151223**

Priority

- SG 2014000622 W 20141230
- SG 2015050500 W 20151223

Abstract (en)

[origin: WO2016108754A1] A method (1500) for deriving a mental state of a subject is disclosed. The method comprises receiving (1502) a bio-signal from the subject; calculating respective statistical variations of at least two physiological parameters derived from the bio-signal; determining (1504) an arousal level of the subject based on the calculated statistical variations of the at least two physiological parameters; deriving a time-domain heart rate variability signal from the bio-signal for calculating at least two heart rate variability parameters; determining (1506) a valence level of the subject based on the at least two heart rate variability parameters; and deriving (1508) the mental state from the arousal level and valence level. A related apparatus is also disclosed.

IPC 8 full level

**A61B 5/16** (2006.01)

CPC (source: EP KR US)

**A61B 5/0205** (2013.01 - EP KR US); **A61B 5/021** (2013.01 - EP KR US); **A61B 5/024** (2013.01 - EP US); **A61B 5/02405** (2013.01 - EP KR US); **A61B 5/0816** (2013.01 - EP KR US); **A61B 5/14507** (2013.01 - KR); **A61B 5/16** (2013.01 - EP US); **A61B 5/165** (2013.01 - EP KR US); **A61B 5/7239** (2013.01 - KR US); **A61B 5/14507** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**WO 2016108754 A1 20160707**; AU 2015372661 A1 20170706; AU 2015372661 B2 20210401; CN 107427267 A 20171201; CN 107427267 B 20210723; EP 3240481 A1 20171108; EP 3240481 A4 20181121; JP 2018504188 A 20180215; JP 2021154150 A 20211007; JP 6903579 B2 20210714; JP 7191159 B2 20221216; KR 20170109554 A 20170929; NZ 732929 A 20220429; SG 11201704941S A 20170728; US 11076788 B2 20210803; US 2017340257 A1 20171130; US 2021321924 A1 20211021

DOCDB simple family (application)

**SG 2015050500 W 20151223**; AU 2015372661 A 20151223; CN 201580076908 A 20151223; EP 15875799 A 20151223; JP 2017534975 A 20151223; JP 2021104055 A 20210623; KR 20177021053 A 20151223; NZ 73292915 A 20151223; SG 11201704941S A 20151223; US 201515537967 A 20151223; US 202117360403 A 20210628